

GREG BELL Lieutenant Governor

# Department of **Environmental Quality**

Amanda Smith Executive Director

DIVISION OF AIR QUALITY Cheryl Heying Director

DAQE-IN0107900011-11

February 17, 2011

**Brian Evans Brigham Young University** PO Box 20100 Provo, UT 84602

Dear Mr. Evans:

Intent to Approve: Modification of Approval Order DAQE-AN0107900010-10 to Install One Re:

**Emergency Generator** 

Project Number: N010790-0011

The attached document is the Intent to Approve for the above-referenced project. The Intent to Approve is subject to public review. Any comments received shall be considered before an Approval Order is issued. The Division of Air Quality is authorized to charge a fee for reimbursement of the actual costs incurred in the issuance of an Approval Order. An invoice will follow upon issuance of the final Approval Order.

Future correspondence on this Intent to Approve should include the engineer's name as well as the DAQE number as shown on the upper right-hand corner of this letter. The project engineer for this action is Camron Harry, who may be reached at (801) 536-4232.

Sincerely,

Martin D. Gray, Manager **New Source Review Section** 

MDG:CAH:kw

Mike Owens cc:

**Utah County Health Department** 

# STATE OF UTAH

# **Department of Environmental Quality**

# **Division of Air Quality**

# INTENT TO APPROVE: Modification of Approval Order DAQE-AN0107900010-10 to Install One Emergency Generator

Prepared by: Camron Harry, Engineer Phone: (801) 536-4232 Email: caharry@utah.gov

#### INTENT TO APPROVE NUMBER

DAQE-IN0107900011-11

Date: February 17, 2011

Brigham Young University
Main Campus
Source Contact:

Mr. Steven Zohner Phone: (801) 422-2804

Martin D. Gray, Manager New Source Review Section Utah Division of Air Quality

#### **ABSTRACT**

Brigham Young University (BYU) has requested approval to modify AO DAQE-AN01079000010-10 to add a diesel fired 755 hp emergency generator at the Clyde Engineering Building on campus. The main campus of BYU is located in Provo, Utah County. Utah County is a nonattainment area of the NAAQS for  $PM_{10}$  and  $PM_{2.5}$ . Provo is a maintenance area for CO and attainment area for all other criteria pollutants.

NSPS, 40 CFR 60 Subpart A, Subpart Db, Subpart Dc and Subpart IIII, apply to this source. MACT, 40 CFR 63 Subpart A, Subpart M, Subpart KK, and Subpart ZZZZ apply to this source. Title V of the 1990 Clean Air Act applies to this source. This AO is being processed as an enhanced AO, and the Title V permit will be administratively amended after the AO is issued.

The emissions, in tons per year, will change as follows:  $NO_x + 0.36$ , CO + 0.22,  $PM_{10} + 0.004$ ,  $PM_{2.5}$  (subset of  $PM_{10}$ ) + 0.004, VOC + 0.02,  $CO_2 + 43.60$ , and total HAPs + 0.001.

The potential to emit totals, in tons per year, will be as follows:  $NO_x = 111.52$ , CO = 36.09,  $PM_{10} = 10.83$ ,  $PM_{2.5}$  (subset of  $PM_{10}$ ) = 10.83,  $SO_2 = 214.61$ , VOC = 16.01, Total HAPs = 9.48, and  $CO_2e = 81,269$ .

The NOI for the above-referenced project has been evaluated and has been found to be consistent with the requirements of UAC R307. Air pollution producing sources and/or their air control facilities may not be constructed, installed, established, or modified prior to the issuance of an AO by the Executive Secretary of the Utah Air Quality Board.

A 30-day public comment period will be held in accordance with UAC R307-401-7. A notification of the intent to approve will be published in The Daily Herald on February 22, 2011. During the public comment period the proposal and the evaluation of its impact on air quality will be available for the public to review and provide comment. If anyone so requests a public hearing within 15 days of publication, it will be held in accordance with UAC R307-401-7. The hearing will be held as close as practicable to the location of the source. Any comments received during the public comment period and the hearing will be evaluated. The proposed conditions of the AO may be changed as a result of the comments received.

#### Name of Permittee:

#### **Permitted Location:**

Brigham Young University PO Box 20100 Provo, UT 84602 Main Campus B-340 ASB Brigham Young University Provo, UT 84602

**UTM coordinates**: 445,000 m Easting, 4,455,200 m Northing, UTM Zone 12 **SIC code**: 8221 (Colleges, Universities, & Professional Schools)

#### **Section I: GENERAL PROVISIONS**

- I.1 All definitions, terms, abbreviations, and references used in this AO conform to those used in the UAC R307 and 40 CFR. Unless noted otherwise, references cited in these AO conditions refer to those rules. [R307-101]
- I.2 The limits set forth in this AO shall not be exceeded without prior approval. [R307-401]
- I.3 Modifications to the equipment or processes approved by this AO that could affect the emissions covered by this AO must be reviewed and approved. [R307-401-1]
- I.4 All records referenced in this AO or in other applicable rules, which are required to be kept by the owner/operator, shall be made available to the Executive Secretary or Executive Secretary's representative upon request, and the records shall include the five-year period prior to the date of the request. Unless otherwise specified in this AO or in other applicable state and federal rules, records shall be kept for a minimum of five (5) years. [R307-415-6a]
- I.5 At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any equipment approved under this AO, including associated air pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Executive Secretary which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. All maintenance performed on equipment authorized by this AO shall be recorded. [R307-401-4]
- I.6 The owner/operator shall comply with R307-150 Series. Inventories, Testing and Monitoring. [R307-150]
- I.7 The owner/operator shall comply with UAC R307-107. General Requirements: Unavoidable Breakdowns. [R307-107]

#### **Section II: SPECIAL PROVISIONS**

- II.A The approved installations shall consist of the following equipment:
- II.A.1 Main Campus

**BYU Main Campus** 

#### II.A.2 **Portable Emergency Generators**

Diesel-fired and propane-fired emergency generators that are moved to various locations on campus as needed.

This equipment is listed for informational purposes only.

# II.A.3 Diesel-Fired Emergency Generators <200 Hp

Location	Maximum engine Hp rating		
Bean Life Science Museum	20		
Miller Park Baseball Fields	26		
Brewster Building	67		
Wyview Telephone Node	67		
Wyview Park	67		
Auxiliary Maintenance Building	75		
Helaman Halls Telephone Node	75		
Ellsworth Building	99		
J. Reuben Clarke Law Building	145		
Brimhall Building	150		
Chemicals Management Building	150		
Crabtree Technology Building	167		

# II.A.4 Diesel-Fired Emergency Generators 200-600 Hp

Location	Maximum engine Hp rating		
Conference Center	201		
Harman Continuing Education Building	201		
Cougar Stadium	235		
Information Technology Building	250		
Wilkinson Center	268		
Indoor Practice Facility	308		
Kimball Tower	308		
Marriott Center	335		
Smoot Administration Building (1)	335		
Smoot Administration Building (2)	335		
Cannon Center	352		
Jesse Knight Building	380		
Joseph F. Smith Building	450		

# II.A.5 Diesel-Fired Emergency Generators >600 Hp

Location	Maximum engine Hp rating
Physical Plant Central Heating	650
Tanner Building	755
Clyde Engineering Building	755
Student Health Center	804
Benson Building (1)	1005
Benson Building (2)	1005
Talmage Building (1)	2220
Talmage Building (2)	2220

Talmage Building (3)2220Broadcast Building (1)2922Broadcast Building (2)2922

#### II.A.6 Two Boilers

Fuel Type: Natural gas
Heat Input Capacity: 8.4 MMBTU/hr

8.4 MMBTU/hr Laundry facility

# II.A.7 One Boiler (Unit #1)

Location

Fuel Type: Natural Gas with Oil as a backup fuel

Heat Input Capacity: 64.0 MMBTU/hr NSPS: Subpart Dc

# II.A.8 Two Boilers (Unit #2 & Unit #3)

Fuel Type: Coal

Heat Input Capacity: 64.0 MMBTU/hr - each

Exhaust: Main stack via the Fabric Filter Baghouse

NSPS: These boilers were installed and operating prior to the applicability

date of 40 CFR 60 Subpart Dc. They are not subject to the

provisions of these NSPS requirements.

# II.A.9 Two Boilers (Unit #4 & Unit #6)

Fuel Type: Natural Gas with Oil as a backup fuel

Heat Input Capacity: 192.0 MMBTU/hr - each

NSPS: Subpart Db

#### II.A.10 One Boiler (Unit #5)

Fuel Type: Coal

Heat Input Capacity: 128,000,000 BTU/hr

Exhaust: Main stack via the Fabric Filter Baghouse

NSPS: These boilers were installed and operating prior to the applicability

date of 40 CFR 60 Subpart Db. They are not subject to the

provisions of these NSPS requirements.

#### II.A.11 Boilers

Fuel Type: Natural Gas

Heat Input Capacity: Each less than 5.0 MMBTU/hr

Location: Various buildings

This equipment is listed for informational purposes only.

#### II.A.12 One Central Heating Plant

One Central Heating Plant Fabric Filter Baghouse

## II.A.13 Dry Cleaning Equipment

Three units subject to 40 CFR 63 Subpart M

Process: Dry-to-Dry units Solvent: Perchloroethylene

# II.A.14 Teaching Kilns

Fuel Type: Natural Gas

Location: East of Building #66

#### II.A.15 Four Paint Booths

Locations: Brewster Building

Auxiliary Maintenance Shop

Auto Shop Snell Building

Associated Controls: Particulate arrestor filters

#### II.A.16 Small Paint Booths

Paint booths using spray cans for minor painting/teaching listed for information purposes only. The paint booths are located at several locations at the BYU Campus. B73- East of Snell Building, Brewster Building, Clyde Building, Fletcher Building, Harris Fine Arts Center, Monte L Bean, Stephen L Richards Building, Snell Building, University Press Building, Wilkinson Building Student Center, Museum of Art, IT Building.

These paint booths are listed for informational purposes only.

#### II.A.17 One Bio-Safety Laboratory

Associated Controls: HEPA filtering system controls emissions from the containment

hood exhaust stack.

This equipment is listed for informational purposes only.

# II.A.18 Printing Equipment

MACT 40 CFR 63 Subpart KK

#### II.A.19 Four Fuel Storage Tanks

Location: Central Heating Plant

Capacity: 30,000 gallons each (three tanks)

Fuel Type: Fuel oil

Location: Broadcast Building
Capacity: 20,000 gallons (one tank)

Fuel Type: Fuel oil

This equipment is listed for informational purposes only.

# II.A.20 Three Cyclonic Dust Collectors

Three Cyclonic Dust Collectors (one in the Auxiliary Maintenance Building, one in the Brewster Building, and one in the Snell Building).

These dust collectors were installed prior to November 29, 1969 and are not required to be permitted.

# **II.B** Requirements and Limitations

#### II.B.1 Limitations and Test Procedures

II.B.1.a BYU shall notify the Executive Secretary in writing when the installation of the new equipment has been completed and is operational. The new equipment includes the following:

Location Maximum hp Rating

Clyde Engineering Building 755

To ensure proper credit when notifying the Executive Secretary, send your correspondence to the Executive Secretary, attn: Compliance Section.

If construction and/or installation have not been completed within 18 months from the date of this AO, the Executive Secretary shall be notified in writing on the status of the construction and/or installation. At that time, the Executive Secretary shall require documentation of the continuous construction and/or installation of the operation and may revoke the AO. [R307-401-18]

II.B.1.b Emissions to the atmosphere at all times from the indicated emission point(s) shall not exceed the following rates and concentrations:

Central Heating Plant	Pollutant	lb/hr	ppmdv
			$(7\% O_2 dry)$
Boiler #1	$NO_x$	9.55	95
Boiler #2	$NO_x$	37.4	331
Boiler #3	$NO_x$	37.4	331

Boiler #4	$NO_x$	38.5	127
Boiler #5	$NO_x$	74.8	331
Boiler #6	$NO_x$	38.5	127
Central Heating Plant	Pollutant	lb/hr	grains/dscf
			(68°F, 29.92 in Hg)
Central Heating Plant			
Baghouse (Unit #8)	$PM_{10}$	1.83	0.010

[R307-401]

# II.B.1.c Stack testing to show compliance with the emission limitations stated in the above condition shall be performed as specified below:

	Central Heating	Plant			Testing	Test
A.	<b>Emission Point</b>		Polluta	nt	Status	Frequency
	Boiler #1		$NO_x$		*	@
	Boiler #2		$NO_x$		*	#
	Boiler #3		$NO_x$		*	#
	Boiler #4		$NO_x$		*	#
	Boiler #5		$NO_x$		*	#
	Boiler #6		$NO_x$		*	#
	Baghouse	$PM_{10}$		*	#	

# B. Testing Status

- \* The initial testing has already been performed.
- # Stack test frequency as established in the Title V operating permit.
- @ If Boiler #1 is operated for more than 100 hours per rolling 12-month period, the stack test shall be performed within 60 days of exceeding 100 hours of operations.

#### C. Notification

The Executive Secretary shall be notified at least 30 days prior to conducting any required emission testing. A source test protocol shall be submitted to DAQ when the testing notification is submitted to the Executive Secretary.

The source test protocol shall be approved by the Executive Secretary prior to performing the test(s). The source test protocol shall outline the proposed test methodologies, stack to be tested, and procedures to be used. A pretest conference shall be held, if directed by the Executive Secretary.

#### D. Sample Location

The emission point shall be designed to conform to the requirements of 40 CFR 60, Appendix A, Method 1, or other methods as approved by the Executive Secretary.

An Occupational Safety and Health Administration (OSHA) or Mine Safety and Health Administration (MSHA) approved access shall be provided to the test location. [R307-401]

#### II.B.1.d E. Volumetric Flow Rate

40 CFR 60, Appendix A, Method 2 or other testing methods approved by the Executive Secretary.

#### $F. PM_{10}$

For stacks in which no liquid drops are present, the following methods shall be used: 40 CFR 51, Appendix M, Methods 201, 201a, or other testing methods approved by the Executive Secretary. The back half condensibles shall also be tested using the method specified by the Executive Secretary. All particulate captured shall be considered  $PM_{10}$ .

For stacks in which liquid drops are present, methods to eliminate the liquid drops should be explored. If no reasonable method to eliminate the drops exists, then the following methods shall be used: 40 CFR 60, Appendix A, Method 5, 5a, 5d, or 5e as appropriate, or other testing methods approved by the Executive Secretary. The back half condensibles shall also be tested using the method specified by the Executive Secretary. The portion of the front half of the catch considered  $PM_{10}$  shall be based on information in Appendix B of the fifth edition of the EPA document, AP-42, or other data acceptable to the Executive Secretary.

The back half condensibles shall not be used for compliance demonstration but shall be used for inventory purposes.

#### G. $NO_x$

40 CFR 60, Appendix A, Method 7, 7A, 7B, 7C, 7D, 7E, or other testing methods approved by the Executive Secretary.

#### H. Calculations

To determine mass emission rates (lb/hr, etc.) the pollutant concentration as determined by the appropriate methods above shall be multiplied by the volumetric flow rate and any necessary conversion factors determined by the Executive Secretary, to give the results in the specified units of the emission limitation.

# I. Existing Source Operation

For an existing source/emission point, the production rate during all compliance testing shall be no less than 90% of the average production achieved in the previous three years. [R307-401]

- II.B.1.e Visible emissions from the following emission points shall not exceed the following values:
  - A. All natural gas fueled boilers > 5.0 MMBTU/hr 10% opacity
  - B. All paint booth exhaust stacks 10% opacity
  - C. All baghouse and cyclonic separator exhaust stacks 10% opacity
  - D. All print shop equipment exhaust stacks 10% opacity
  - E. All dry cleaning equipment exhaust stacks 10% opacity
  - F. All diesel engines 20% opacity
  - G. All other points 20% opacity

Opacity observations of emissions from stationary sources shall be conducted according to 40 CFR 60, Appendix A, Method 9.

For sources that are subject to NSPS, opacity shall be determined by conducting observations in accordance with 40 CFR 60.11(b) and 40 CFR 60, Appendix A, Method 9. [R307-305-3]

- II.B.1.f The following production and/or consumption limits shall not be exceeded:
  - A. 16,992 tons of coal consumed annually.
  - B. 405 million scf of natural gas consumed per rolling 12-month period.
  - C. 90,000 gallons of fuel oil with a sulfur content < 0.5% by weight consumed for maintenance.
  - D. 1,200 gallons (8.16 tons) of perchloroethylene consumed per rolling 12-month period.
  - E. 10 percent annual capacity factor\* for natural gas and fuel oil for each boiler defined as Unit #4 and Unit #6 in Condition II.A.9 above.
    - \*Annual capacity factor as defined in 40 CFR 60.41b.

Compliance with each limitation shall be determined on a rolling 12-month total. Based on the first day of each month, a new 12-month total shall be calculated using data from the previous 12 months. Monthly calculations shall be made no later than 20 days after the end of each calendar month. Records of coal or natural gas consumption shall be kept for all periods when the Central Heating Plant is in operation. Consumption of natural gas, fuel oils, and coal for other boilers shall be determined by examination of each fuel supplier's billing records along with operations logs showing which day(s) each type of fuel was used. The records of consumption shall be kept on a daily basis. Supervisor monitoring and maintaining an operations log shall determine hours of operation of the emergency boiler and generators. [R307-401]

II.B.1.g Emergency generators shall be used for electricity producing operation only during the periods when electric power from the public utility is interrupted, or for regular maintenance of the generators. Records documenting the usage of each generator shall be kept in a log; and they shall show the date each generator was used, the duration in hours of each generator usage, and the reason for each generator usage.

BYU may operate emergency generators for the purpose of maintenance checks and readiness testing. Maintenance checks and readiness testing of such units is limited to 100 hours per rolling 12-month period per engine.

To determine compliance with a rolling 12-month total, based on the first day of each month, a new 12-month total shall be calculated using data from the previous 12 months. Monthly calculations shall be made no later than 20 days after the end of each calendar month. Hours of operation shall be determined by supervisor monitoring and maintaining an operations log which shall include time of day of operation. The records of operation shall be kept on a weekly basis and shall be kept for all periods when the facility is in operation. [R307-401]

II.B.1.h The paint booths locations at the Brewster Building, Auxiliary Maintenance Shop, Auto Shop, and Snell Building shall be equipped with a paint arrestor particulate filter, or equivalent to control particulate emissions. All exhaust air from each of the paint booths shall be routed through its particulate control system before being exhausted to the atmosphere. [R307-401]

# II.B.2 Fuels

II.B.2.a BYU shall use natural gas as a primary fuel and fuel oil with a sulfur not to exceed 0.015% by weight as a backup fuel in Boiler #1, Boiler #4, and Boiler #6.

Fuel oil may be used as an alternate fuel supply during natural gas curtailment. If any other fuel is to be used, an AO shall be required. [R307-401]

- II.B.2.b BYU shall use only natural gas as fuel in the two laundry facility 8.4 MMBtu/hr boilers. [R307-401]
- II.B.2.c BYU shall use coal as fuel in Boiler #2, Boiler #3, and Boiler #5. [R307-401]
- II.B.2.d BYU shall use natural gas as a fuel in the East Building #66 teaching kilns. [R307-401]
- II.B.2.e BYU shall notify the Executive Secretary within three business days of using fuel oil during a natural gas curtailment.

Coal may only be used as an emergency measure fuel during the annual period starting November 1 and ending February 28 (or February 29 in the case of leap years), with the approval of the Executive Secretary, in the event both natural gas and fuel oil are unavailable. In addition, coal may be used during these winter months to perform stack testing as required by the DAQ. [R307-401]

- II.B.2.f The sulfur content of any coal or any mixture of coals burned shall not exceed either of the following:
  - A. 0.54 pounds of sulfur per million Btu heat input as determined by ASTM Method D-4239-85, or approved equivalent.
  - B. 0.60% by weight as determined by ASTM Method D-4294-89, or approved equivalent.

For the sulfur content of coal, BYU shall either:

- C. The weight percent sulfur and the fuel heating value shall be obtained by submitting a coal sample to a laboratory, acceptable to the Executive Secretary, on no less than a monthly basis.
- D. For each delivery of coal, inspect the fuel sulfur content expressed as weight % determined by the vendor using methods of the ASTM; or
- E. For each delivery of coal, inspect documentation provided by the vendor that indirectly demonstrates compliance with this provision. [R307-401-8]
- II.B.2.g The sulfur content of any fuel oil or diesel burned shall not exceed 0.015 percent by weight for fuel oils or diesel consumed in all equipment. For each delivery of oil, BYU shall either:
  - A. Determine the fuel sulfur content expressed as weight % in accordance with the methods of the American Society for Testing Materials (ASTM) Method D-4294-89 or approved equivalent;
  - B. Inspect the fuel sulfur content expressed as weight % determined by the vendor using methods of the ASTM; or
  - C. Inspect documentation provided by the vendor that indirectly demonstrates compliance with this provision. [R307-401-8]

# II.B.3 **VOC and HAP Limitations**

II.B.3.a The plant-wide emissions of VOCs and HAPs from the paint booths, printing/publishing, dry cleaning, and other campus-wide similar operations shall not exceed:

16.00 tons per rolling 12-month period for VOCs generated from painting and printing/publishing activities

0.20 tons per rolling 12-month period for Xylene

0.33 tons per rolling 12-month period for Glycol Ethers

5.22 tons per rolling 12-month period for any combination of HAPs not listed above which include: Toluene, Methanol, Methyl Iso-Butyl Ketone, Methylene Chloride, N-Butyl Acetate, or Cumene.\*

\* Any individual HAP included in this list shall have an emission limit less than the Emission Threshold Value (ETV) for that chemical, as provided for in R307-410-5.

Perchloroethylene, which has a limit elsewhere in this AO, and the products of incomplete combustion from the use of the various internal combustion engines and boilers are not included in this total.

Compliance with each limitation shall be determined on a rolling 12-month total. Based on the twentieth day of each month, a new 12-month total shall be calculated using data from the previous 12 months.

The VOC and HAP emissions shall be determined by maintaining a record of VOC and HAP emitting materials used each month. The record shall include the following data for each material used:

- A. Name of the VOC and HAPs emitting material, such as: paint, adhesive, solvent, thinner, reducers, chemical compounds, toxics, isocyanates, etc.
- B. Density of each material used (pounds per gallon)
- C. Percent by weight of all VOC and HAP in each material used
- D. Gallons of each VOC and HAP emitting material used
- E. The amount of VOC and HAP emitted monthly by each material used shall be calculated by the following procedure:

VOC = (% VOC by Weight/100) x [Density (lb/gal)] x Gal Consumed x 1 ton/2000 lb

HAP = (% HAP by Weight/100) x [Density (lb/gal)] x Gal Consumed x 1 ton/2000 lb

- F. The amount of VOC or HAP emitted monthly from all materials used.
- G. The amount of VOCs or HAPs reclaimed for the month shall be similarly quantified and subtracted from the quantities calculated above to provide the monthly total VOC or HAP emissions. [R307-401]

# Section III: APPLICABLE FEDERAL REQUIREMENTS

In addition to the requirements of this AO, all applicable provisions of the following federal programs have been found to apply to this installation. This AO in no way releases the owner or operator from any liability for compliance with all other applicable federal, state, and local regulations including UAC R307.

NSPS (Part 60), IIII: Stationary Comp/Ignit R.I.C.E

MACT (Part 63), A: General Provisions

NSPS (Part 60), Db: Indus Com Institu Steam Generator NSPS (Part 60), Dc: Small Indus Com InstitnSteamGenratr

MACT (Part 63), KK: Printing/Publishing

MACT (Part 63), M: Dry Cleaners NSPS (Part 60), A: General Provisions

MACT (Part 63), ZZZZ: Recipro. Int. Comb Engine (RICE)

# **PERMIT HISTORY**

The final AO will be based on the following documents:

Incorporates Additional Information dated January 12, 2011 Incorporates Additional Information dated December 10, 2010

Is Derived From NOI dated December 6, 2010

Replaces DAQE-AN010790010-10 dated November 22, 2010

# **ADMINISTRATIVE CODING**

The following information is for UDAQ internal classification use only:

**Utah County** 

CDS A

MACT (Part 63), NSPS (Part 60), Nonattainment or Maintenance Area,  $PM_{10}$  SIP / Maint Plan, Title V (Part 70) Area source, Title V (Part 70) Major source

# **ACRONYMS**

The following lists commonly used acronyms and associated translations as they apply to this document:

40 CFR Title 40 of the Code of Federal Regulations

AO Approval Order

BACT Best Available Control Technology

CAA Clean Air Act

CAAA Clean Air Act Amendments

CDS Classification Data System (used by EPA to classify sources by size/type)

CEM Continuous emissions monitor

CEMS Continuous emissions monitoring system

CFR Code of Federal Regulations

CO Carbon monoxide CO<sub>2</sub> Carbon Dioxide

CO<sub>2</sub>e Carbon Dioxide Equivalent - 40 CFR Part 98, Subpart A, Table A-1

COM Continuous opacity monitor

DAQ Division of Air Quality (typically interchangeable with UDAQ)

DAQE This is a document tracking code for internal UDAQ use

EPA Environmental Protection Agency

GHG Greenhouse Gas(es) - 40 CFR 52.21 (b)(49)(i)

GWP Global Warming Potential - 40 CFR Part 86.1818-12(a)

HAP or HAPs Hazardous air pollutant(s)

ITA Intent to Approve LB/HR Pounds per hour

MACT Maximum Achievable Control Technology

MMBTU Million British Thermal Units

NAA Nonattainment Area

NAAQS National Ambient Air Quality Standards

NESHAP National Emission Standards for Hazardous Air Pollutants

NOI Notice of Intent NO<sub>x</sub> Oxides of nitrogen

NSPS New Source Performance Standard

NSR New Source Review

 $PM_{10}$  Particulate matter less than 10 microns in size  $PM_{2.5}$  Particulate matter less than 2.5 microns in size

PSD Prevention of Significant Deterioration

PTE Potential to Emit R307 Rules Series 307

R307-401 Rules Series 307 - Section 401

SO<sub>2</sub> Sulfur dioxide

Title IV Title IV of the Clean Air Act
Title V Title V of the Clean Air Act

TPY Tons per year

UAC Utah Administrative Code

UDAQ Utah Division of Air Quality (typically interchangeable with DAQ)

VOC Volatile organic compounds

DAQE-IN0107900011-11 Page 16